

VAIDS-DSML exercise block 4

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knn classification

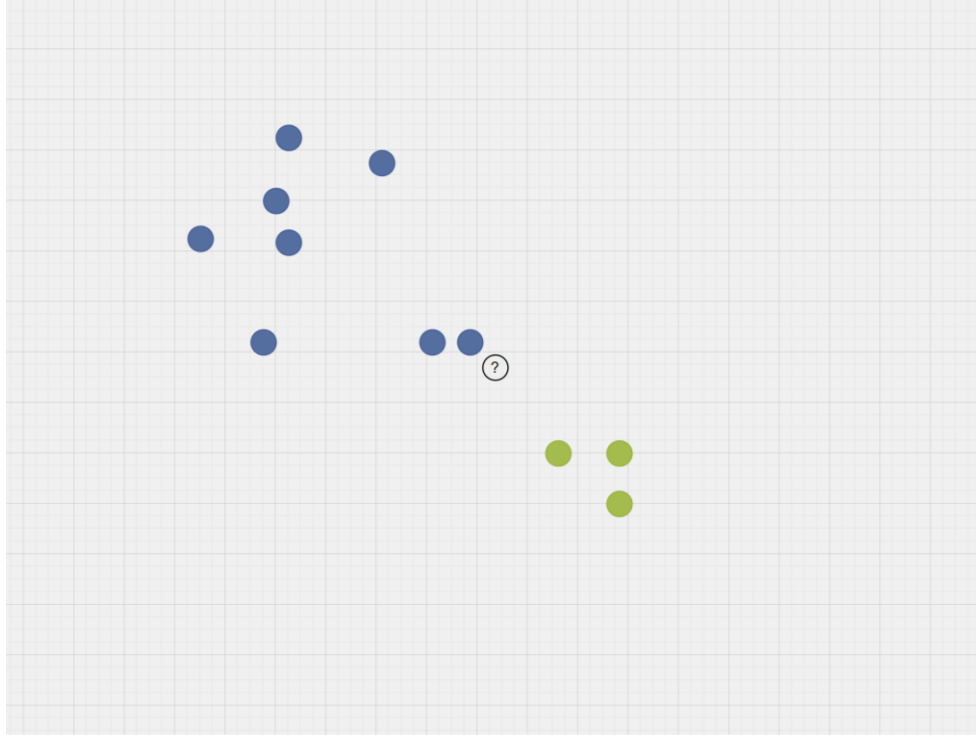
- Problem

- we have 1372 samples of banknotes of which we know some features and whether they are real or counterfeit
- we have 5 samples of banknotes of which we know the same feature but **not** whether they are real or counterfeit

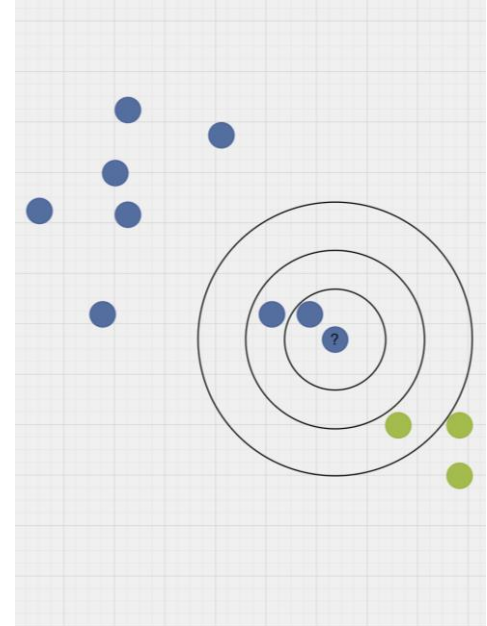
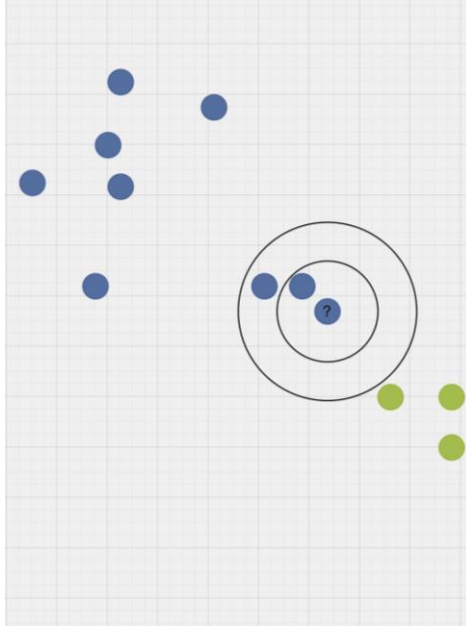
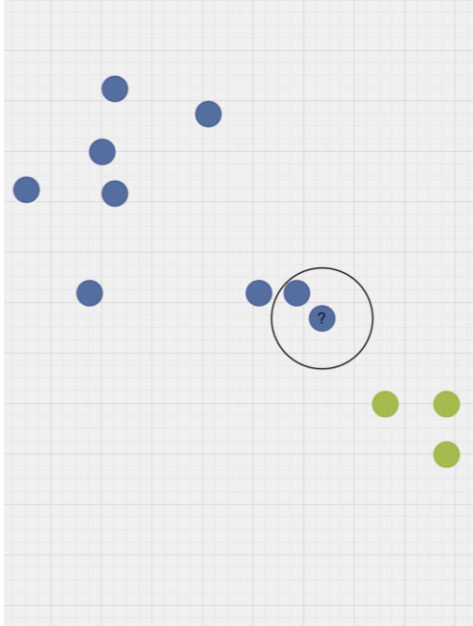
- Solution

- for each of the samples, calculate the Manhattan distance of its features to each known sample's features
- sort the results in an ascending order
- take a majority vote of the k closest known samples to classify the unknown samples

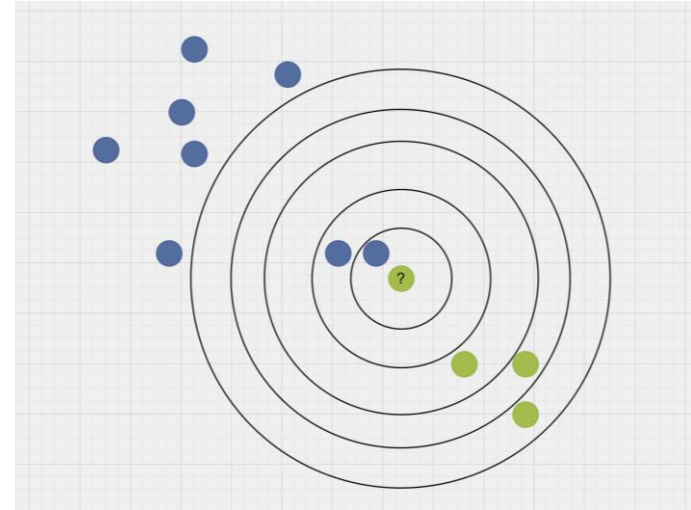
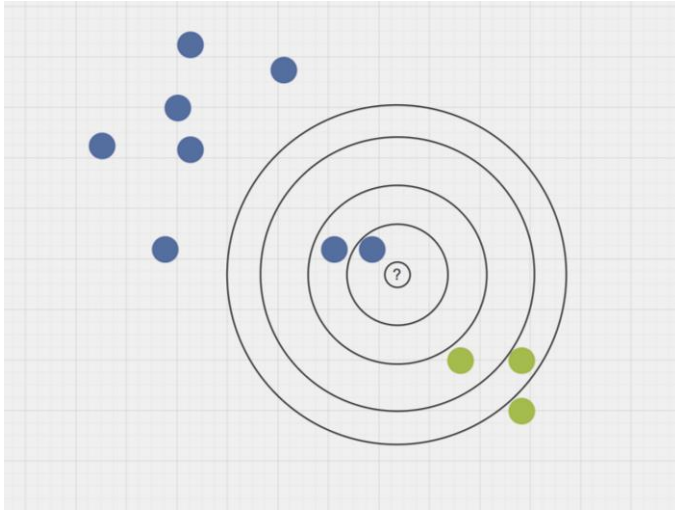
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